

Notice of Allowability

Application No.

10/757,043

Applicant(s)

CHENG, GEORGE SHU-XING

Examiner

Thomas K. Pham

Art Unit

2121

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to request for reconsideration filed 08/22/2005.
2. ☒ The allowed claim(s) is/are 1.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

Reasons for Allowance

1. Claim 1 is allowed.
2. The following is an examiner's statement of reasons for allowance:

While Barlow (U.S. Patent No. 4,214,300) discloses a method for adjusting a variable parameter of a dynamic system in response to a signal representative of the system performance so as to optimize system performance with respect to that parameter. The method includes pre-selecting the performance index from predetermined functions of the system error; adjusting of a performance index by changing the relevant channel gain of the controller in an increasing or decreasing direction. Barlow does not teach adjusting the performance of a model-free (MFA) adaptive controller that includes establishing a selectable performance index quantity between 0.01 and 100; and other limitations related to these features in combination with the remaining elements and features of the claimed invention.

And Owen (U.S. Patent No. 5,838,561) discloses a method of diagnosing a malfunction of a process control system which permits automatic assessment of control loop performance in a multi-loop interactive and nonlinear dynamic environment. The method includes computing of performance index for each loop to quantify performance where disturbances to the loop conform to normal external conditions. Owen does not teach adjusting the performance of a model-free (MFA) adaptive controller that includes setting the controller time constant as $T_c = T/I_p$; and other limitations related to these features in combination with the remaining elements and features of the claimed invention.

Neither of these references taken either alone or in combination discloses a method for adjusting the performance of a model-free (MFA) adaptive controller having all the claimed

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features of applicant's instant invention, specifically including: establishing a selectable performance index quantity between 0.01 and 100; and setting the controller time constant as $T_c = T/I_p$. Also, there is no motivation to combine the Barlow reference with the Owen reference to meet these limitations. It is for these reasons that applicant's invention defines over the prior art of record.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to examiner *Thomas Pham*; whose telephone number is (571) 272-3689, Monday to Thursday from 6:30 AM - 5:00 PM EST or contact Supervisor *Mr. Anthony Knight* at (571) 272-3687.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Thomas Pham
Patent Examiner



September 13, 2005



Anthony Knight
Supervisory Patent Examiner
Group 3600